NOVEMBER/DECEMBER 2023

CCP43 — RELATIONAL DATABASE MANAGEMENT SYSTEM

Time: Three hours

Maximum: 75 marks

SECTION A — $(10 \times 2 = 20 \text{ marks})$

Answer ALL questions.

- 1. Define DBMS.
- 2. What is entity set?
- 3. Why relational algebra used in DBMS?
- 4. What is integrity and security?
- 5. Define normalization.
- 6. What is query? Give an example.
- 7. What is RAID?
- 8. Expand PL/SQL.
- 9. What is concurrency control?
- 10. What is recovery system?

SECTION B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions.

11. (a) What are the features of ER diagram?

Or

- (b) What is the difference between ER diagram and database diagram?
- 12. (a) Explain the types of embedded SQL.

Or

- (b) How to write a function in SQL.
- 13. (a) Explain data independence and its types.

Or

- (b) Define functional and transitive dependency.
- 14. (a) Explain the structure of hard disk.

Or

- (b) What are different characteristics of relations?
- 15. (a) What are the three main problem in concurrency control?

Or

(b) Explain the four types of dead lock.

Answer any THREE questions.

- 16. Explain the five layers of the database architecture.
- 17. Describe the structure of a database model.
- 18. Explain Codd's 12 rules of relational model.
- 19. Point out the advantage and disadvantage of indexed sequential file organisation.
- 20. Explain the different types of lock.

